

Corn Series: Three Sisters Tacos

Nourishment

The three sisters are eaten together, as we learn about how corn, beans and squash were the main nourishment for Mesoamerican civilizations and reflect on how historical diets influence our diets today.

Life Skills

Students make corn tortillas from scratch, cook winter squash and develop their tasting skills by seasoning the beans and adjusting the pico de gallo to taste.

Communication

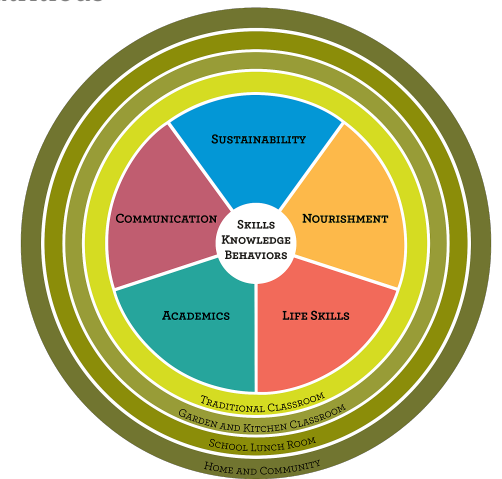
Students collaborate to cook four different dishes, using good judgment and compromise to agree on their seasoning.

Sustainability

Students compare Mesoamerican agricultural techniques, with modern food production techniques and consider the role of agriculture in the daily lives of ancient and modern people.

Academics

Academics fulfill History–Social Science Content Standards for Meso-American and Andean civilizations; Common Core State Standards for integrating information in different formats; following a multistep procedure; collaborative discussion; speaking and language; Health Standards for nutrition; making healthy food choices; safe food handling and preparing nutritious food.



The Corn Series: Three Sisters Tacos Abstract

Summary

In this 7th grade humanities lesson, students prepare corn tortillas, pico de gallo, beans, and roasted squash while they explore how historical foodways continue to impact cooking and eating today. Students learn about Mesoamerican agricultural techniques, compare them with modern food production techniques and discuss how agriculture affects the daily lives of people now and then. This is the fourth of five lessons in the Corn Series.

Objectives

After this lesson, students will be able to:

- Describe Aztec methods of food production, including the three sisters
- Compare Aztec and modern methods of producing corn for food, and the role of food production in modern and Aztec lives
- Describe how efficiency in food production and food processing impacts **lifestyle** and environment
- Connect the diets of historic cultures with foods we eat today

Assessments

During this lesson, students will:

- Discuss the agricultural techniques used by the Aztecs, and describe how the three sisters grow together
- Describe how differences between Aztec and modern methods of food production, especially in efficiency, impact **lifestyle** and environment
- Recognize how foods that originated in the Americas are prepared and eaten in modern times

Communication is strengthened as students collaborate to complete four different dishes, use their own judgment and compromise with others around opinions of taste when seasoning the beans, pico de gallo and roasted squash. **Sustainability** is highlighted as students learn about Mesoamerican agricultural techniques, compare them with modern food production techniques and contrast the role of agriculture in the daily lives of ancient and modern people. **Nourishment** is expanded as students eat the three sisters all together (beans, corns, and squash), learn about how these three food crops were the main nourishment for Mesoamerican civilizations and reflect on how historical diets influence our diets today. **Life Skills** are

sharpened as students make corn tortillas from scratch again, cook the winter squash broken down in the second Corn Series lesson and develop their tasting skills by seasoning the beans and adjusting the Pico de Gallo to taste.

Academics fulfill History–Social Science Content Standards for Meso-American and Andean civilizations; Common Core State Standards for integrating information in different formats; following a multistep procedure; collaborative discussion; speaking and language; Health Standards for nutrition; making healthy food choices; safe food handling and preparing nutritious food. See **Connections to *Academic Standards*** below for details.

Edible Schoolyard curriculum emphasizes developing community and personal stewardship, along with skills that will help students navigate different situations throughout their lives; using and caring for **tools** and equipment at the ESY Cooking Station, and beginning to choose the **right tool** for each job; making connections between the diets of **historic cultures** and foods we eat today. See **Connections to *Edible Schoolyard Standards*** below for details.

This lesson follows the BEETLES Project’s *Learning Cycle* (Invitation-> Exploration -> Concept Invention -> Application -> Reflection) and uses their *Discussion Routines* (Think-Pair-Share, Whip-Around). All are highlighted in *Green** with an asterisk for easy identification. See the documents BEETLES_Discussion_Routines.pdf and BEETLES_Learning_Cycle.pdf included in **Resources** below for more information. Games and activities from other sources are also identified in *Green*, without an asterisk.

Connections to *Academic Standards*

History–Social Science Content Standards for California Public Schools, Grade 7

- 7.7 Students compare and contrast the geographic, political, economic, religious, and social structures of the Meso-American and Andean civilizations.
 - 7.7.1 Study the locations, landforms, and climates of Mexico, Central America, and South America and their effects on Mayan, Aztec, and Incan economies, trade, and development of urban societies.
 - 7.7.2 Study the roles of people in each society, including class structures, family life, war- fare, religious beliefs and practices, and slavery.
 - 7.7.5 Describe the Meso-American achievements in astronomy and mathematics, including the development of the calendar and the Meso-American knowledge of seasonal changes to the civilizations’ agricultural systems.

Common Core State Standards, English Language Arts and Literacy, Grade 7

- RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
- SL.7.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 7 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
 - SL.7.1.b Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
 - SL.7.1.c Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
 - SL.7.1.d Acknowledge new information expressed by others and, when warranted, modify their own views.
- SL.7.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.
- SL.7.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 7 Language standards 1 and 3 on page 53 for specific expectations.)
- L.7.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - L.7.1.a Explain the function of phrases and clauses in general and their function in specific sentences.
 - L.7.1.b Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.
 - L.7.1.c Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.*
- L.7.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - L.7.3.a Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.*
- L.7.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Health Education Content Standards for California Public Schools, Grades 7&8,

- 1.2.N Identify nutrients and their relationships to health.
- 1.4.N Describe how to keep food safe through proper food purchasing, preparation, and storage practices.
- 1.5.N Differentiate between diets that are health-promoting and diets linked to disease.
- 1.8.N Identify ways to prepare food that are consistent with current research-based guidelines for a nutritionally balanced diet.
- 1.10.N Identify the impact of nutrition on chronic disease.

Connections to *Edible Schoolyard* Standards

Edible Schoolyard 3.0

In the Edible Schoolyard Program

- 1.0: Students work with each other and teachers to develop community and personal stewardship, along with skills that will help them navigate different situations throughout their lives.
- 1.1.1 - 1.3.12: This lesson fulfills all Edible Schoolyard Program standards, numbers 1.1.1 through 1.3.12. See *The Edible Schoolyard Berkeley Standards* for details.

In the Kitchen Classroom, 7th grade

- Tools 2.1.1: Use and care for **tools** and equipment at the ESY Cooking Station, and begin to choose the right tool for each job.
- Concepts 2.3.11: Make connections between the diets of **historic cultures** and foods we eat today.

The Corn Series: Three Sisters Tacos Lesson

Materials

For the Chef Meeting

- K7-4 Visual Aid
- Pico de Gallo recipe
- Roasting Instructions
- Ingredients and tools for demonstration

Ingredients

- Queso fresco

For the Tortillas

- Masa
- Water

For the Beans

- Cooked beans
- Cumin, ancho chile powder, and salt

For the Pico de Gallo

- Tomatoes
- Jalapenos
- Onion
- Cilantro
- Lime
- Salt

For the Roasted Squash

- Cubed winter squash

- Olive oil
- Salt and pepper

Tools

For the Tortillas

- Mixing bowl
- Tortilla press (with plastic sheet to prevent sticking)
- Offset spatula

For the Beans

- Heavy bottomed pot
- Wooden spoon

For the Pico de Gallo

- Mixing bowl
- Garlic peeler
- Reamer
- Chefs' knives
- Paring knives
- Cutting boards
- Measuring spoons

For the Roasted Squash

- Sheet pan
- Parchment paper
- Mixing bowl
- Oven mitts

Equipment

- Stove
- Oven
- Electric griddle

Timeline Overview

Total Duration: 90 minutes

1. *Invitation** (5 minutes)
2. *Concept Invention** (10 minutes)
3. *Application** (65 minutes)
4. *Reflection** (10 minutes)

Before you Begin

- Create the Visual Aid with roasting instructions
- Copy the Pico de Gallo recipe to hand out
- Soak and cook the beans
- Prepare the tortilla dough by mixing 3 ½ cups of masa with warm water
- Peel and cube the squash
- Collect all the tools and ingredients, and distribute them to the tables
- Gather supplies for the Chef Meeting
- Preheat the oven
- Preheat the griddle

Procedures

Welcome

1. *Invitation**: (5 minutes)
 - a. Welcome students and introduce the tortillas, beans, pico de gallo and roasted squash as traditional foods eaten in Mesoamerica, which is what we now call Central America.

At the Chef Meeting

2. *Concept Invention**: (10 minutes)

Students review previous Corn Series lessons and make historical connections to the three sisters.

 - a. Explain to students that the beans and squash they'll be preparing and eating today are the same ones they started to process in the second lesson of the Corn Series, and that the beans have been cooked in water on the stove.
 - i. Tell students that these foods connect to the themes we've been exploring all week:
 - 1) How food production and processing techniques have changed over time.
 - 2) How those changes have impacted **lifestyle**, health, and environment.

- b. Prompt students to reflect on the differences in efficiency of the various corn grinding methods they practiced in the first Corn Series lesson.
- c. Explain that in the same way those modern processing techniques are more efficient, modern production techniques are more efficient as well.
 - i. They require less human energy to produce more food.
 - ii. Crop irrigation in the ESY Garden is an example of how modern water delivery systems require far less human labor than carrying buckets or digging canals to deliver water to crops.
- d. Discuss Aztec agricultural techniques, including **chinampas**, and inter-cropping the three sisters.
 - i. Prompt students to discuss the benefits of these methods, and compare them to the benefits and drawbacks of modern methods of large-scale **mono-cropping**.
- e. Use the three sisters as an illustrative example to make these comparisons:
 - i. Growing the three crops together allows each to provide a benefit to the others, uses space efficiently and also creates a balanced diet for the people growing the food (beans and corn are a complete protein).
 - ii. Today we don't have to inter-crop because we can get food from many different sources – so this is an example of how food production methods are very closely tied to culture.
- f. Though modern methods for production and processing have changed, eating these foods is still a way to connect to historical cultures.
 - i. These foods would not exist without hundreds, maybe thousands of years of humans domesticating wild plants through agriculture, continuing to grow them year after year and collecting seeds to grow them again.
- g. The ways we'll be preparing them today also are a product of all kinds of historical processes, we'll be eating these foods as an investigation of how history influences our lives today.
- h. Break into table groups.

At the Table

3. *Application**: (65 minutes)

Students make traditional Mesoamerican foods using the three sisters.

- a. Welcome the group and ask one of the following as a check-in question:
 - i. Which of the three sisters is your favorite to eat?
 - ii. Which of the three sisters do you most identify with:
 - 1) Corn, the supporter?
 - 2) Beans, the nourisher?
 - 3) Squash, the protector?

- iii. What is your favorite fruit or vegetable native to the Americas?
- b. Introduce activity for the day and assign cooking jobs.
- c. Prepare pico de gallo, roast squash, season beans, press and cook tortillas, crumble cheese.
- d. Set the table; eat; clean up.

At the Closing Circle

4. Reflection*: (10 minutes)

- a. Ask students to share something they learned from this lesson and/or if there is a traditional food or cuisine that they feel most impacts their life.

Vocabulary

Chinampas
Poly-culture
Monoculture
Lifestyle

Contributors

All lessons at the Edible Schoolyard Berkeley are developed in collaboration with the teachers and staff of the Edible Schoolyard and Martin Luther King Jr. Middle School.

Learning Cycle and Think-Pair-Share discussion routine © The Regents of the University of California. All materials created by BEETLESTM at The Lawrence Hall of Science.

Resources

K7-4_Visual_Aid.pdf
Pico_de_Gallo_Recipe.pdf
BEETLES_Learning_Cycle.pdf (See lesson G6-0)

Roasted Vegetables

Wash



Cut into bite size pieces



Season

With olive oil
salt and pepper



Cook at 400° in
a single layer



Pico de Gallo

Salsa

1/2 bunch of cilantro, chopped
(leaves and stems)

3 medium tomatoes, chopped

1 1/2 onion, chopped

1 jalapeno, chopped (optional)

Juice of 1/2 a lime

Salt and pepper to taste

In small bowl, combine cilantro, tomatoes, onion, jalapeno, lime juice, salt and pepper and mix well and enjoy !!!

